AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 – 10.   (Cancelled)

11.   (Previously Presented) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, characterized in that:

when a number K of transmission-standby data frames exceeds the number N of idle channels,

said STA waits until a relationship $N \geq K$ is satisfied, all radio channels become idle before said relationship $N \geq K$ is satisfied, a prescribed time elapses before said relationship $N \geq K$ is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship $N \geq K$ is satisfied; and then

generates and simultaneously transmits data packets in a number according to the number of idle radio channels.

12.　(Previously Presented)　A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, characterized in that:

when a number K of transmission-standby data frames is smaller than a number N of idle channels,

said STA waits until a relationship N = K is satisfied, a prescribed time elapses before said relationship N = K is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship N = K is satisfied; and then

generates and simultaneously transmits plural data packets.

13 – 14.　(Cancelled)

15.　(Currently Amended)　A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

~~transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, characterized by:~~

transmitting plural data packets ~~having a same packet time length~~ simultaneously from one STA to another STA using plural idle radio channels and [[said]] Multiple Input Multiple Output ("MIMO"), <u>where each of the plural data packets require same amount of time for transmission from one STA to another STA,</u> the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames exceeds a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship $T \geq K$ is satisfied, all radio channels become idle before said relationship $T \geq K$ is satisfied, a prescribed time elapses before said relationship $T \geq K$ is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship $T \geq K$ is satisfied; and then

said STA generates and simultaneously transmits data packets in a number according to the number of simultaneous transmissions.

16.   (Currently Amended)   A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

~~transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, characterized by~~:

transmitting plural data packets ~~having a same packet time length~~ simultaneously from one STA to another STA using plural idle radio channels and [[said]] Multiple Input Multiple Output ("MIMO"), <u>where each of the plural data packets require same amount of time for transmission from one STA to another STA,</u> the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames is smaller than a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T = K is satisfied, a prescribed time elapses before said relationship T = K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T = K is satisfied; and then

said STA generates and simultaneously transmits plural data packets.

17 – 27.   (Cancelled)

28. (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames exceeds the number N of idle channels,

said STA waits until a relationship $N \geq K$ is satisfied, all radio channels become idle before said relationship $N \geq K$ is satisfied, a prescribed time elapses before said relationship $N \geq K$ is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship $N \geq K$ is satisfied; and then

generates and simultaneously transmits data packets in a number according to the number of idle radio channels.

29. (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames is smaller than a number N of idle channels,

said STA waits until a relationship N = K is satisfied, a prescribed time elapses before said relationship N = K is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship N = K is satisfied; and then

generates and simultaneously transmits plural data packets.

30. (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of

MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames exceeds a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T ≥ K is satisfied, all radio channels become idle before said relationship T ≥ K is satisfied, a prescribed time elapses before said relationship T ≥ K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T ≥ K is satisfied; and then

said STA generates and simultaneously transmits data packets in a number according to the number of simultaneous transmissions.

31.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of

MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames is smaller than a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T = K is satisfied, a prescribed time elapses before said relationship T = K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T = K is satisfied; and then

said STA generates and simultaneously transmits plural data packets.

32.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets in accordance with transmission rates of plural idle radio channels; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames exceeds the number N of idle channels,

said STA waits until a relationship $N \geq K$ is satisfied, all radio channels become idle before said relationship $N \geq K$ is satisfied, a prescribed time elapses before said relationship $N \geq K$ is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship $N \geq K$ is satisfied; and then

generates and simultaneously transmits data packets in a number according to the number of idle radio channels.

33.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets in accordance with transmission rates of plural idle radio channels; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames is smaller than a number N of idle channels,

said STA waits until a relationship N = K is satisfied, a prescribed time elapses before said relationship N = K is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship N = K is satisfied; and then

generates and simultaneously transmits plural data packets.

34.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets in accordance with transmission rates of plural idle radio channels; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames exceeds a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T ≥ K is satisfied, all radio channels become idle before said relationship T ≥ K is satisfied, a prescribed time elapses before said relationship T ≥ K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T ≥ K is satisfied; and then

said STA generates and simultaneously transmits data packets in a number according to the number of simultaneous transmissions.

35.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

generating plural data packets in accordance with transmission rates of plural idle radio channels; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames is smaller than a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T = K is satisfied, a prescribed time elapses before said relationship T = K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T = K is satisfied; and then

said STA generates and simultaneously transmits plural data packets.

36.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

setting transmission rates of plural idle radio channels to a same transmission rate;

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to anther STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames exceeds the number N of idle channels,

said STA waits until a relationship N ≥ K is satisfied, all radio channels become idle before said relationship N ≥ K is satisfied, a prescribed time elapses before said relationship N ≥ K is satisfied, or the number or a data size of transmission-standby data frames reaches a prescribed value before said relationship N ≥ K is satisfied; and then

generates and simultaneously transmits data packets in a number according to the number of idle radio channels.

37.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

setting transmission rates of plural idle radio channels to a same transmission rate;

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to anther STA using plural idle radio channels, where each of the plural data packets require same amount of time for transmission from one STA to another STA, characterized in that:

when a number K of transmission-standby data frames is smaller than a number N of idle channels,

said STA waits until a relationship N = K is satisfied, a prescribed time elapses before said relationship N = K is satisfied, or the number or a data size of transmission-

standby data frames reaches a prescribed value before said relationship N = K is satisfied; and then

generates and simultaneously transmits plural data packets.

38. (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

setting transmission rates of plural idle radio channels to a same transmission rate;

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames exceeds a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T ≥ K is satisfied, all radio channels become idle before said relationship T ≥ K is satisfied, a prescribed time elapses before said relationship T ≥ K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T ≥ K is satisfied; and then

said STA generates and simultaneously transmits data packets in a number according to the number of simultaneous transmissions.

39.   (New) A wireless packet communication method transmitting a data packet between two stations ("STAs") that use plural radio channels and setting transmission rates for respective radio channels, by using a radio channel that is judged idle by carrier sensing, characterized by:

when it is detected by said carrier sensing that plural radio channels are idle at the same time,

setting transmission rates of plural idle radio channels to a same transmission rate;

generating plural data packets; and

transmitting plural data packets simultaneously from one STA to another STA using plural idle radio channels and Multiple Input Multiple Output ("MIMO"), where each of the plural data packets require same amount of time for transmission from one STA to another STA, the plural data packets being in a number that is equal to a sum of MIMO numbers of plural respective radio channels, and said STAs capable of using plural radio channels and MIMO together, characterized in that:

when a number K of transmission-standby data frames is smaller than a number of simultaneous transmissions T, the number of simultaneous transmissions T being said sum of said MIMO numbers of said plural respective radio channels,

said STA waits until a relationship T = K is satisfied, a prescribed time elapses before said relationship T = K is satisfied, or a number or a data size of transmission-standby data frames reaches a prescribed value before said relationship T = K is satisfied; and then

said STA generates and simultaneously transmits plural data packets.